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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,772	01/30/2004	Oliver Koslowski	DT-6749	7086
30377	7590	06/29/2006	EXAMINER	
DAVID TOREN, ESQ. ABELMAN FRAYNE & SCHWAB 666 THIRD AVENUE NEW YORK, NY 10017-5621			HOWELL, DANIEL W	
			ART UNIT	PAPER NUMBER
			3722	

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/768,772	KOSLowski ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel W. Howell	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4 and 6-11 is/are rejected.
- 7) Claim(s) 5 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. ____ .   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____ .                                   |

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1. Claims 6-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6, 8, and 10 should more clearly define the frictional coefficient  $\mu$  and its relationship with the torque, axial thrust, and speeds. Claims 7 and 11 should more clearly set forth and define the curve of maximal power and different working points, such that it is clear how these items are determined.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rieger et al (3259023) in view of Uchida et al (5,558,476). Figure 1a of Rieger et al shows a spindle motor for rotating a drill bit 20 and a feed motor for feeding the tool axially. Located near the bottom of the spindle 22 are a torque sensor and a feed thrust sensor. The controller is shown schematically in figures 1 and 1a, and the controller is discussed in more detail in columns 4 through 9. It is noted that the tool 20 is not a core bit. Uchida et al shows a similar drilling machine having both rotary and axial feed motors, plus a core bit 10. Such bits are useful for cutting larger diameters, in that they do not expend energy cutting up the core within the hollow cutter. It is considered to have been obvious to have replaced the drill bit of Rieger et al with a core bit as shown by Uchida et al in order to cut larger diameter holes while not expending a lot of power making the hole. Lines 52+ of column 9 discuss maintaining a desired axial thrust, which requires controlling the axial feed. This section discusses having the spindle torque

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programmed as a predetermined proportion of the feed thrust, such that this proportion would be the frictional coefficient  $\mu$ . Regarding claims 2 and 3, line 43-44 of column 4 acknowledge that any conventional sensors may be used to generate the signals representing the parameters, including the axial thrust.

4. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. While no art has been applied against claims 6-9 and 11, the examiner will wait until seeing how they are amended to overcome the 112, 2<sup>nd</sup> paragraph, rejections before commenting on their allowability.

6. On line 10 of page 1, the German patent numeral seems to be incorrect.

7. Any inquiry concerning the content of this communication from the examiner should be directed to Daniel Howell, whose telephone number is 571-272-4478. The examiner's office hours are typically about 10 am until 6:30 pm, Monday through Friday. The examiner's supervisor, Monica Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, Group 3720 is encouraging FAXing of responses to Office actions directly into the Group at FAX number to 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Daniel Howell of Art Unit 3722 at the top of your cover sheet.



Daniel W. Howell  
Primary Examiner  
Art Unit 3722